

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
South Jersey Ice and Cold Storage - Removal Polrep



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II**

Subject: **POLREP #10**
 Progress
 South Jersey Ice and Cold Storage
 A26W
 Vineland, NJ
 Latitude: 39.4895070 Longitude: -75.0235380

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From: Dwayne Harrington, On-Scene Coordinator

Date: 7/20/2016

Reporting Period: 7/20/2016

1. Introduction

1.1 Background

Site Number:	A26W	Contract Number:	EP-S2-15-01
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:		Operable Unit:	
Mobilization Date:	6/23/2016	Start Date:	6/23/2016
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	06/23/2016
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

1.1.2 Site Description

The site is a three-story ice manufacturing and cold storage facility in a downtown residential area of City of Vineland, and has been in operation since 1922. The current owner assumed operations around 1998. The facility's refrigeration system contains an estimated 4,500 to 5,000 lbs of anhydrous ammonia gas.

1.1.2.1 Location

The cold storage facility is located at 544 East Pear Street in Vineland, Cumberland County, New Jersey. It is situated within a densely populated residential neighborhood, and there are numerous residential homes and apartments as close as approximately 100 feet from the facility.

1.1.2.2 Description of Threat

Anhydrous ammonia is a CERCLA Extremely Hazardous Substance, a CAA 112(r) RMP Regulated Substance, and a US DoD and DOJ Category 1 Toxic Industrial Chemical (i.e., battlefield-deployable chemical weapon).

An inspection of the facility's refrigeration system by the City of Vineland Fire Department via a qualified consulting refrigeration engineer determined that the system is in an extreme state of disrepair, to the extent that it presents an immediate threat to public safety. The engineer's recommendation is that since the necessary emergency repairs to the system would not likely be implemented in sufficient time, the ammonia should be immediately removed from the system to protect public and worker safety. EPA inspected the facility on June 23, 2016, and concurs with the concerns of the engineering report about the state of deterioration of the system and the immediate threat to public safety. An off-site consequence analysis by EPA determined that a worst-case release of ammonia from the facility would impact approximately 15,208 residents.

1.1.3

Preliminary Removal Assessment/Removal Site Inspection Results

On June 23, 2016, EPA conducted an inspection at the facility in response to a report that was prepared by a refrigeration engineer consultant of the City of Vineland Fire Department (VFD) detailing the deteriorating state of the ammonia refrigeration system. Concerns included the poor condition and location of pressure relief discharge vents relative to the immediate homes and surrounding community; it is suspected that the system contains anywhere from 4,500 – 12,000 pounds (lbs) of anhydrous

ammonia. It was determined that the facility could not mitigate the threat posed by the deteriorated system to the surrounding community in a timely manner.

Based on these concerns, the VFD requested EPA assistance with responding to the threat that the cold storage facility's refrigeration system presents to the surrounding residential community.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

EPA is continuing to respond to the deteriorating ammonia refrigeration system at a cold storage warehouse in a residential neighborhood. The facility's deteriorating ammonia refrigeration system (circa 1922) potentially contains 4,500 – 12,000 lbs of anhydrous ammonia gas liquefied under pressure, and presents a serious threat to the surrounding neighborhood should the system fail. Many sections of the ammonia system and the building have been frozen over, making the response more challenging. On June 28, 2016, EPA activated its Emergency and Rapid Response Services (ERRS) contractor to secure the system against a release and the Removal Support Team (RST) contractor to provide real-time 24/7 community air monitoring for ammonia gas. Several nearby residences have been evacuated.

As noted below, ERRS contractors have installed a scrubber system to protect it from a catastrophic release. Unified command has been established and EPA is currently planning for the removal of the ammonia and the decommissioning of the system. There is significant concern over the structural integrity of the building, which potentially will be made worse by the thawing of the ice surrounding parts of the ammonia system and building once the ammonia removal begins. The owner is attempting to remove all product, reportedly worth over \$1 million, from the facility before the ammonia removal begins.

2.1.2 Response Actions to Date

Activities for 7/20/2016 are as follows:

EPA's refrigeration contractor was on site this morning and began Phase II of operations. This included closing the king valve on the system which allows the liquid ammonia to collect in the high pressure receiver. It is estimated approximately 85% of the liquid ammonia contents of the refrigeration system have been collected in the high pressure receiver. The liquid ammonia will be removed from the system tomorrow. After the removal of the liquid ammonia is complete, it is anticipated less than 10% of ammonia will be left in the system in the form of vapor. The vapor will be discharged into the scrubber unit. This entire process is anticipated to be complete tomorrow. A representative from EPA's refrigeration subcontractor will remain on site 24 hours to ensure the system remains in a safe operating condition.

DOL issued the facility an order to prohibit the use of the refrigeration system effective 7/23/16. This allows EPA's refrigeration contractor to operate the system to remove the ammonia.

The mandatory evacuation of residences within a 500 foot radius of the site was enacted this morning. The evacuation will be in place from 0800-1700 Wednesday and Thursday and could be extended through Friday if necessary.

The Wallace School on Mill Road in Vineland is the current shelter location for the residents within the mandatory evacuation zone (500 ft. of facility). EPA PAD assisted VFD, VPD and VDOH with transportation of residents to the shelter. The Salvation Army provided lunch and snacks and will be at the shelter again tomorrow. 20 people utilized the shelter and 2 dogs and 1 cat were boarded in the boarding trailer.

PAD received and responded to two media inquiries, one from the Press of Atlantic City and one from the Vineland Daily Journal. The Vineland Daily Journal visited the shelter and interviewed evacuated residents along with OSC Harrington.

The flyer developed by PAD and VDOH that was distributed to the community was also distributed to the media list for this event and government officials.

All seven homes in the immediate vicinity of the facility eligible for relocation have opted to relocate and are currently relocated. The seven homes contain a total of 36 people. Relocation of the residents is scheduled to continue until the ammonia is removed from the system and the UC determines it is safe for the residents to return home, which at this time is anticipated to be Friday.

Activities for 7/19/2016 are as follows:

The facility owner completed removing all frozen product from the facility on 7/19/2016. This was verified by a walkthrough of the facility by EPA, NJDEP, VFD and the property owner.

EPA's refrigeration contractor was on site and conducted daily inspection of refrigeration system. No change in the condition of the system from yesterday were observed.

Representatives from NJDOL attended this morning's UC meeting. They gave an overview of DOL's regulations as they apply to the facility and indicated based on the engineering reports provided by EPA, the City of Vineland and the facility owner, they are moving forward with requiring the facility owner to shut down and remove the ammonia from the refrigeration system.

VFD contacted Conrail/CSX to advise them of the situation at the facility which is located adjacent to their short line. Conrail/CSX will close the line Wednesday, Thursday and Friday from 0800 – 1700.

A mandatory evacuation of residences within a 500 foot radius of the site has been enacted. The evacuation will be in place from 0800-1700 Wednesday, Thursday and Friday. This is to coincide with Phase II operations (pump down and removal of liquid and vapor ammonia from the refrigeration system). Current census data indicates the population within this zone includes 89 people plus 29 housing units. EPA and members from the City of Vineland began distributing information flyers regarding site operations and the mandatory evacuation procedures.

VFD has arranged for the Wallace School on Mill Road in Vineland to serve as the shelter location for the residents within the mandatory evacuation zone (500 ft. of facility). The shelter will be open Wednesday, Thursday and Friday. Transportation will be provided by the Vineland Public School District, if needed. The Salvation Army will be providing food services at the shelter. VFD has arranged for a 53 foot boarding trailer to be staged at the shelter location for evacuees to bring their pets during the evacuation period. The trailer will be staffed by Vineland Animal Control personnel.

Barricades have been staged in preparation of road closures within the vicinity of the facility.

OSC Harrington conducted an on camera interview with South Jersey News, Channel 22 and provided an interview to a reporter from the Atlantic City Press.

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On 7/18/2016, the facility owner removed 7 truckloads of frozen product from the facility. 6 truckloads remain and are scheduled to be removed from the facility tomorrow. The facility should then be void of any frozen product.

EPA's refrigeration contractor was on site and completed preparation work for removal of the ammonia. This work included a refrigeration system operations and safety check. Safety interlocks functioned properly and the system was determined to be sufficiently safe for the planned operations. System valving fabrication and direct piping installation to the system for the pump out was completed.

EPA and NJDEP attended a meeting convened by the VFD with the approximately thirty-five local, county, and state emergency response officials responsible for coordinating the evacuation of the homes, including an apartment complex, during the planned system pump down tentatively scheduled for Wednesday and Thursday. Plans include relocating effected residents to local community centers, road closures, food service, emergency preparations for hazmat response and electric power cutoff to the facility if necessary.

EPA PAD received and replied to one press inquiry from the Press of Atlantic City. PAD and OSC Harrington conducted a Q&A session with a reporter from The Grapevine.

All seven homes in the immediate vicinity of the facility eligible for relocation have opted to relocate and are currently relocated. The seven homes contain a total of 36 people. Relocation of the residents is scheduled to continue until the ammonia is removed from the system and the UC determines it is safe for the residents to return home.

A Unified Command meeting was held on 7/17/16 to discuss the current situation at the facility. The HASP was reviewed and approved by all members of the UC. JHAs are currently being developed for each phase of operations and will be distributed when completed. Phase I of operations consists of EPA's refrigeration contractor (IRS) preparing to remove the ammonia from the facility. This work will include installing a 1" pipe from the refrigerant charging line to the outside of the building which will later be used to remove the ammonia. The preparation work also includes inspecting various components of the refrigeration system for functionality and safety.

The facility owner did not remove any frozen product today, but estimates 10-13 truckloads remain and will be removed from the facility no later than Tuesday, July 19, 2016.

At 0800 on Saturday, July 16, 2016, a refrigeration technician from Arctic Refrigeration was able to perform an inspection of the ammonia system inside South Jersey Ice and Cold Storage. The inspection took approximately 1.5 hours and concentrated mostly in the machinery room.

A summary of the inspection report is that, considering the age of the system and the lack of maintenance, the facility owner is operating the system as safely as possible, however, the system itself should not be considered safe. There are few safety devices on the system and it is not clear that safety equipment will actually operate as designed or at all. There are leaks in the system inside the machinery room and one leak outside the building that was identified during the installation of the scrubber. The lower floor of the warehouse section was also inspected, however, ice buildup is so extensive that the condition of the piping and valves could not be determined.

NJDEP, who accompanied EPA and our contractors during the inspection noted consistent readings of 5 ppm of ammonia in the machinery room with spikes to 10 ppm. These readings were taken using a MultiRae multigas detector with an ammonia sensor.

During the inspection, the facility owner pointed out that there was an operating exhaust fan located in the machinery room. The fan is operated manually and was in working condition, however, when in use it causes melting of the ice on the piping in the machinery room.

EPA has begun planning activities for handling, sampling, treating and potential disposal of melt water from the facility in the event the excessive ice load within the facility begins to melt and poses a threat to the structural integrity of the building.

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A Unified Command meeting was held on 7/15/2016 to discuss the current situation at the facility. The facility owner continued to remove frozen product from the facility. The facility owner estimates there are 20 truckloads remaining in the facility and has scheduled the removal of 10 truckloads on Saturday, 7/16/2016 and the remaining 10 on Monday, 7/18/2016. At that point, the facility should not contain anymore frozen product.

EPA received the structural engineering report from Tetra Tech (EPA's contractor), the system assessment report from IRS (EPA's contractor) and the operational plan for the pump out of the ammonia from the refrigeration system from IRS. The documents were distributed to members of the UC and will be discussed at Sunday's meeting.

EPA has begun planning activities for handling, sampling, treating and potential disposal of melt water from the facility in the event the excessive ice load within the facility begins to melt and poses a threat to the structural integrity of the building.

EPA's refrigeration contractor is scheduled to be on site on Monday, July 18 to begin preparations for the removal of the ammonia from the refrigeration system.

PAD met with the relocated residents Friday morning at the main hotel to ensure a smooth transition as residents relocate to other accommodations for part of the weekend. Most residents accepting EPA assistance will return to the main hotel on Sunday, July 17. Accordingly, updated information is being provided to Vineland Fire Dept. for securing the homes while unoccupied. Fact Sheet # 3, dated July 12, was successfully uploaded to the Vineland Dept. of Health web site.

No media inquiries were received. During the previous 24 hour news cycle, the Press of Atlantic City published an article based on an interview the newspaper conducted with the facility's attorney. For reference, see: "No threat of ammonia gas leak at Vineland plant existed, attorney says," Press of Atlantic City, Barlas, Thomas, July 14, 2016.

A Unified Command meeting was held on 7/14/16, to discuss the current situation at the facility. EPA's refrigeration contractor is scheduled to be on site on Monday, July 18 to begin preparations for the removal of the ammonia from the refrigeration system. After discussions at the meeting this morning, the property owner has expressed interest in making the necessary repairs to the refrigeration system and did not grant EPA access to the facility to remove the ammonia. The owner continued frozen product removal and removed an approximate total of 178 pallets today. An estimated 530 pallets remain at the facility. Removal of the frozen product is anticipated to be completed Sunday, July 17, 2016.

EPA has installed an emergency aqueous scrubber system directly to a portion of the emergency relief vent system. EPA's refrigeration contractor is scheduled to begin preparations for ammonia removal from the system on Monday, 7/18/16. Preparations are expected to take two days. Following preparations, it is anticipated that approximately 85% of the ammonia will be removed within the first 48 hours of removal operations; this will reduce the threat of a significant off-site release. The removal of the remaining 15% will require approximately an additional week. EPA continues to negotiate access for this activity with the facility owner and his attorney. The amount of ammonia in the system has been estimated between 4,500 – 12,000 lbs.

EPA is working to have a refrigeration contractor inspect the system on-site daily following the initial assessment on July 11, 2016. It has been determined that the removal of the ammonia from the system and decommissioning of the system should occur as a time-critical, extremely controlled action. Additionally, a structural inspection of the building was performed. It was determined that there is adequate internal building support from an intact internal steel framework to prevent a catastrophic collapse of any of the internal floors or the roof; however, due to damage to wooden building joists, there are areas where ammonia lines are essentially supporting the floors above.

On July 12, 2016, EPA met with numerous agencies at the Cumberland County Emergency Operations Center. Meeting attendees included EPA, NJDEP, NJDOH, NJSP-OEM, Vineland Health Department, Vineland Fire Department/Office of Emergency Management, the Vineland City Attorney, Cumberland County Health Department and Cumberland County 911. The meeting was to discuss general conditions at the response operation, the structure of a Unified Command and upcoming operations at the facility. EPA updated all attendees about the status of the removal of frozen product from the facility, the expected timeframe to complete the unloading/shipping process and the timeframe for the evacuation of ammonia from the system. On July 12, 2016, a formal Unified Command structure was formed. Members of Unified Command include EPA, NJDEP, the Vineland Fire Department/OEM and the facility owner.

Product removal by the owner has been ongoing since the initial inspection on June 23, 2016, and is expected to be completed by Monday, July 18, 2016. On July 12 and 13, 2016, 17 truckloads of product were removed from the facility, and approximately 39 truckloads (708 pallets) of product remain. On July 12 and 13, 2016, the Unified Command met with the owner of the facility to discuss the continued removal of frozen product. Although a plan was developed for EPA contractors to assist in the loading of trucks with product and reviewed by EPA attorneys, the property owner stated, under the advice of his attorney, he would not allow EPA personnel or contractors on the facility to assist in frozen product removal operations.

EPA's RST contractor continues to perform 24/7 community and perimeter air monitoring for potential ammonia releases, and IMAAC continues to provide daily release projection updates.

The City of Vineland, including the Vineland Health Department, and the EPA Public Affairs Division (PAD) are continuing to conduct community outreach to educate residents on appropriate protective actions in the event of an ammonia release from the facility, and to keep residents informed of the situation. The VFD continues developing a community emergency notification and public protective action plan for the neighborhood. Fact Sheet # 3 (in English and Spanish) dated July 12, 2016 was produced and provided to the City of Vineland for posting to the City's web site consistent with the previous Fact Sheets. The Fact Sheet was also sent to elected officials and to EPA's media list for the response.

Of the seven homes originally relocated, all remain relocated with the exception of one family of six that have chosen to return to their house and plan to remain there unless EPA suggests that they relocate once the ammonia extraction begins. Detailed information is being provided to the VFD for securing the homes while unoccupied. The relocation is expected to continue for two weeks or until 85% of the ammonia is removed from the system. The need for additional residential relocations and shelter-in-place advisories will be evaluated and implemented as necessary.

EPA PAD received a request and subsequently facilitated a conference call for OSC Neil Norrell to brief Richard Locklear, Special Projects Manager for Southern New Jersey of the Office of U.S. Senator Bob Menendez.

Press interest in the response remains high. On July 12, 2016, EPA PAD received three media inquiries regarding the site and responded to the inquiries. The inquiries were received from the Press of Atlantic City, the Vineland Daily Journal and New Jersey Advanced Media. On July 13, 2016, EPA PAD received and replied to two media inquiries from NJ TV and the Press of Atlantic City. During the current news cycle, interest is turning away from a lead story about an imminent risk, now that a response is underway, and toward the inconvenience and disruption of the relocated families.

For detailed information on response actions prior to July 12, 2016, see the previous POLREPS.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

RPB and ORC will determine if an Order or other enforcement action is necessary to ensure actions are taken immediately by the facility to ensure public safety.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

EPA will begin removal of the ammonia from the refrigeration system.

2.2.1.2 Next Steps

EPA will continue to monitor and oversee the facility's progress in removing product from the facility. EPA will continue to plan for securing the system against release and the removal of the anhydrous ammonia from the system. EPA will continue 24-hour community air monitoring throughout the duration of the response.

2.2.2 Issues

No issues were identified during this reporting period.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

On June 24, 2016, the EPA Emergency and Remedial Response Division Director issued a verbal authorization for \$250,000 to remove the pressurized liquid anhydrous ammonia from the high-pressure receiver and outdoor condensers.

On June 30, 2016, the EPA Emergency and Remedial Response Division Director issued a verbal authorization for an increase of funding to \$500,000 to continue the emergency removal action.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$450,000.00	\$0.00	\$450,000.00	100.00%
TAT/START	\$50,000.00	\$0.00	\$50,000.00	100.00%
Intramural Costs				
Total Site Costs	\$500,000.00	\$0.00	\$500,000.00	100.00%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which

the government may include in any claim for cost recovery.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

The Unified Command includes EPA, NJDEP, the Vineland Fire Department/OEM, the City of Vineland and the facility owner.

3.2 Cooperating Agencies

4. Personnel On Site

EPA: 3 OSCs, 1 PAD, 1 CIC

ERRS: 2

RST: 4

5. Definition of Terms

EPA: United States Environmental Protection Agency

ERRS: Emergency and Rapid Response Services

RST: Removal Support Team

VFD: City of Vineland Fire Department

IMAAC: Interagency Modeling and Atmospheric Assessment Center

PAD: Public Affairs Division

CIC: Community Involvement Coordinator

OEM: Office of Emergency Management

OSC: On-Scene Coordinator

OSHA: Occupational Safety and Health Administration

NJDEP: New Jersey Department of Environmental Protection

NJDOH: New Jersey Department of Health

NJSP-OEM: New Jersey State Police Office of Emergency Management

BER: Bureau of Emergency Response

6. Additional sources of information

6.1 Internet location of additional information/report

6.2 Reporting Schedule

Polreps will continue to be distributed daily.

7. Situational Reference Materials

No information available at this time.